Uniper Energy DMCC Quarterly Newsletter

Q4 2020

Shipowners' Low Carbon Fuel Options Gain Speed

Lars Liebig, Managing Director, Uniper Energy DMCC

In the next decade, we'll see more accelerated change in shipping fuels than we've seen in the last century. What does this heightened diversity mean for shipowners? They must be nimbler than ever – a shift that requires work. It means greening supply chains, bolstering energy efficiency, nurturing more partnerships, streamlining costs, and becoming adept at green finance (frequent change can be expensive to start with). All will help shipowners' fuel portfolios adapt to the inevitable need for a greener status quo as the global push for a lower carbon world intensifies – and maritime fuels are often caught in an unflattering spotlight.

Tried and tested

Overhauls can be stressful for any industry, but there's good news: we know that the supply chain for bunker fuels, including shipowners, can react quickly. We're nearly one year into the International Maritime Organization's (IMOs) ruling to cut the sulphur limit on bunker fuels from 3.5% to 0.5%. Removing these three percentage points marked one of the bunker fuel industry's biggest overhauls in decades. The ruling was designed as part of the IMO's initial greenhouse gas (GHG) strategy to cut carbon intensity of international shipping by 40% by 2030, compared to 2008. And it wasn't cheap. Compliance bills were cited at an additional $25-$30bn in fuel costs for container liners alone in 2020-2023, said Boston Consulting Group (BCG) in late-2019. This was especially tricky for shipowners, an industry emerging from bankruptcies and closures, to absorb. Yet the switch has been relatively seamless – a point which buoys many stakeholders' optimism in the face of even greater change.

LNG ahoy

Appetite for liquified natural gas (LNG) bunkering is undoubtedly rising, helped by the robust supply of this 'greenest fossil fuel'. In early 2019, there were just six LNG bunkering vessels around the world. This had doubled by January this year, with a further 27 on order and/or undergoing commissioning, according to SEA-LNG. Of these 27, the majority are due to come into service by 2023. Plus, the bunkering infrastructure is also rapidly developing. LNG can now be delivered to vessels in some 96 ports with a further 55 ports in the process of facilitating LNG bunkering investments and operations, SEA-LNG detailed. And shipbroker SSY said in November that around 10% of the total tanker orders made so far this year were for LNG dual-fuelled vessels.

But rising demand doesn't mean LNG is a one-stop shop win for all shipowners. It's still a fossil fuel in an increasingly green world, putting it at a high risk of falling victim to environmental restrictions going forward. The stakeholders who've caught on early are proactively examining how to decarbonize LNG, which would vastly elongate its longevity and thus, commercial viability.

Hydrogen: Silver bullet?

Can the most abundant element in the universe transform the maritime fuel industry up to 2050? Yes, but there's a vast amount of groundwork that must first be achieved. Hydrogen's potential is not new; it's had a few false starts in the last half century. But the current revival – illustrated by news headlines describing hydrogen as the, not a, fuel of the future – seems to have greater credibility than ever in the political and business circles embracing sustainability. Still, roadmaps detailing policy and technological developments, an array of pilot projects to pinpoint risk-reward ratios, reliable supply-demand dynamics and scalability, are all still needed. ➔

Oil Markets Quarterly Review

Oil Markets Rally on Vaccine News but the Short-Term Outlook is Still Uncertain

World Oil Demand

Demand has partially recovered from a 16.3mn b/d fall in the second quarter compared with the same period of 2019, but it remained 6.2mn b/d down year-on-year as a result of a second wave of lockdowns. Despite Covid-19 cases rising in the final quarter of 2020, the Covid-19 vaccine euphoria is changing the sentiment of oil markets. Brent prices finally increased to trading over $50/bl in mid-December, the highest since the pandemic started. Chinese insatiable appetite for oil returned back to 11mn b/d in November, but whether it will continue or will be tapered into the new year is a question mark, especially if prices rise to above $50mn b/d.

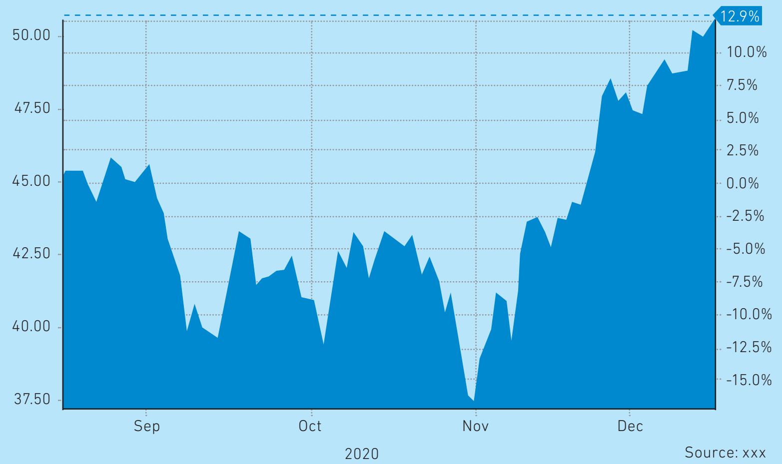
World Oil Supply

Global oil supply rose by 1.5mn b/d in November to 92.7mn b/d. In December, OPEC+ finally agreed to cut 500,000 b/d from January, with their output being reviewed and adjusted throughout meetings in January to March. Furthermore, in December, Libya's production climbed to close to 1.5mn b/d. There is also the likelihood that OPEC+ will pump more than the agreed increase of 500,000 b/d in January as some countries had already allotted January loadings ahead of the new agreement.

Road to Recovery

Oil market rebalancing faces demand strains

Source: ICE



Source: xxx

5.6mn b/d Increase in global consumption of petroleum and liquid fuels in 2021	**27.5mn barrels in 2021** Average OPEC crude oil production	**156.3mn barrels** Volumes of crude oil held in floating storage **↓ by 17.8mn barrels**	**5.7 mn b/d** Demand Recovery in 2021	**96.9 mn b/d** Average Consumption of Oil in 2021

Source: OPEC (Organization of the Petroleum Exporting Countries)

2021 – Average Brent Oil Price Forecasts

Abn Amro **$43/bl**	**Goldman Sachs** **$65/bl**	**Moody's** **$45/bl**	**Citi** **$49/bl**	**Morgan Stanley** **$50/bl**

Sources: ABN AMRO, Goldman Sachs, Moody's, Citibank, Morgan Stanley

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But clearly potential abounds. Nearly all (99%) of the voyages made by container ships along the China-US corridor – one of the busiest shipping lanes in the world – in 2015 could have been powered by hydrogen, detailed the International Council on Clean Transportation (ICCT) this year.

And even this array – LSFO, LNG, and hydrogen – are just a part of the greener marine fuels bucket in the 21st century. There's still plenty of work to explore other clean alternative fuels, such as ammonia and methanol, for example. Proactivity will be pivotal to help shipowners calm the roaring seas of change, for one thing is certain: the status quo they sailed in the last century will be unrecognizable in the next decades to come.

The Outlook for the Maritime Industry Under the New US Administration?

A new US administration brings forth an array of contrast for the next four years of US oil policy that could shape supply and demand dynamics. Over the last four years, the Trump administration rolled out several orders that hindered climate change mitigation. From pulling out of the Paris Agreement, rolling back policies designed to cut greenhouse gas (GHG) emissions, to ending a two-year rent holiday for solar and wind projects operating on federal lands. And there were others. So, President-elect Biden has a lot of catching up to do. Part of Biden's climate plan is to ensure the US achieves a 100% clean energy economy and reaches net-zero emissions no later than 2050. What does that mean for the maritime sector?

Having pledged to re-join the Paris Agreement, Biden is likely to pursue decarbonization strategies for the domestic shipping industry. This could lead to preference to alternative fuels or stringent policies to limit vessel emissions. This is good news for operators that have made significant long-term capital investments into LNG-fueled vessels, and the related port infrastructure, knowing that these investments could once again be backed by the administration. Furthermore, President-elect Biden could drive change through a number of initiatives including dedicating funding to R&D and deployment of zero-emission ships and fuels. Beyond that, port development and is also an area that Biden could bring more attention to. Under the Obama administration, Biden was one of the architects of the American Recovery and Reinvestment Act (ARRA), which led to substantial port investments. Improvements in this area could be bolstered once he takes office in January.

"It's been heartening to see that the incoming administration included the goal of 'Lead[ing] the world to lock in enforceable international agreements to reduce emissions in global shipping' in their climate platform."

Dan Hubbell, Shipping Emissions Campaign Manager, Ocean Conservancy

IMO 2020 Progress Report

Despite the hurdles, the industry's commitment to decarbonization remains firm in line with the International Maritime Organization's (IMO) pledge to reduce carbon emissions by 50% by 2050. As of Q4, 2020, the IMO has agreed to give further consideration to the creation of a $5bn fund to develop zero-carbon marine fuels, which would be backed by a fuel levy. The International Chamber of Shipping (ICS) proposed a $2/t levy on marine fuel purchases last year to create a fund for the research and development of zero-carbon marine fuels.

"The collaboration is aimed to address climate protection, the predominant social issue in the world today. UED's mission is to help countries build up reliable and environmentally friendly energy supplies to support a global transition to cleaner energy. Collaborating with Neutral Fuels enables us to accelerate our efforts."

"UED is already supplying up to 500,000 tons of VLSFO per month from its processing plant in the Port of Fujairah, the world's third-largest bunkering hub. We will leverage our logistics infrastructure and global customer base, which stretches from the Middle East over South/East Africa, and up to India, Singapore and China. The fuel will be available for large tankers and containers, and for smaller short sea and feeder vessels."

Lars Liebig, Managing Director, Uniper Energy DMCC

Uniper Energy DMCC (UED) has been at the forefront of support for IMO 2020 compliance. It has been supplying up to 500,000 tons of VLSFO/ month from its processing plant in the Port of Fujairah. In the most recent move towards addressing climate protection, they have announced a partnership with Neutral Fuels to provide maritime biofuel in Fujairah. Neutral Fuels will blend UED's very low sulfur fuel oil (VLSFO) and with its biofuel, creating a maritime fuel that meets the IMO standard under their ISO8217:2010 RMG380 specification, thereby cutting emissions of carbon dioxide.

Average Bunker Prices: Fujairah

October - December 2020	High	Low	Average	Spread
LSFO (<0.5%)	$416.50/mt	$323.50/mt	$366.50/mt	$93.00/mt
HSFO (IFO380)	$320.00/mt	$253.50/mt	$289.50/mt	$66.50/mt

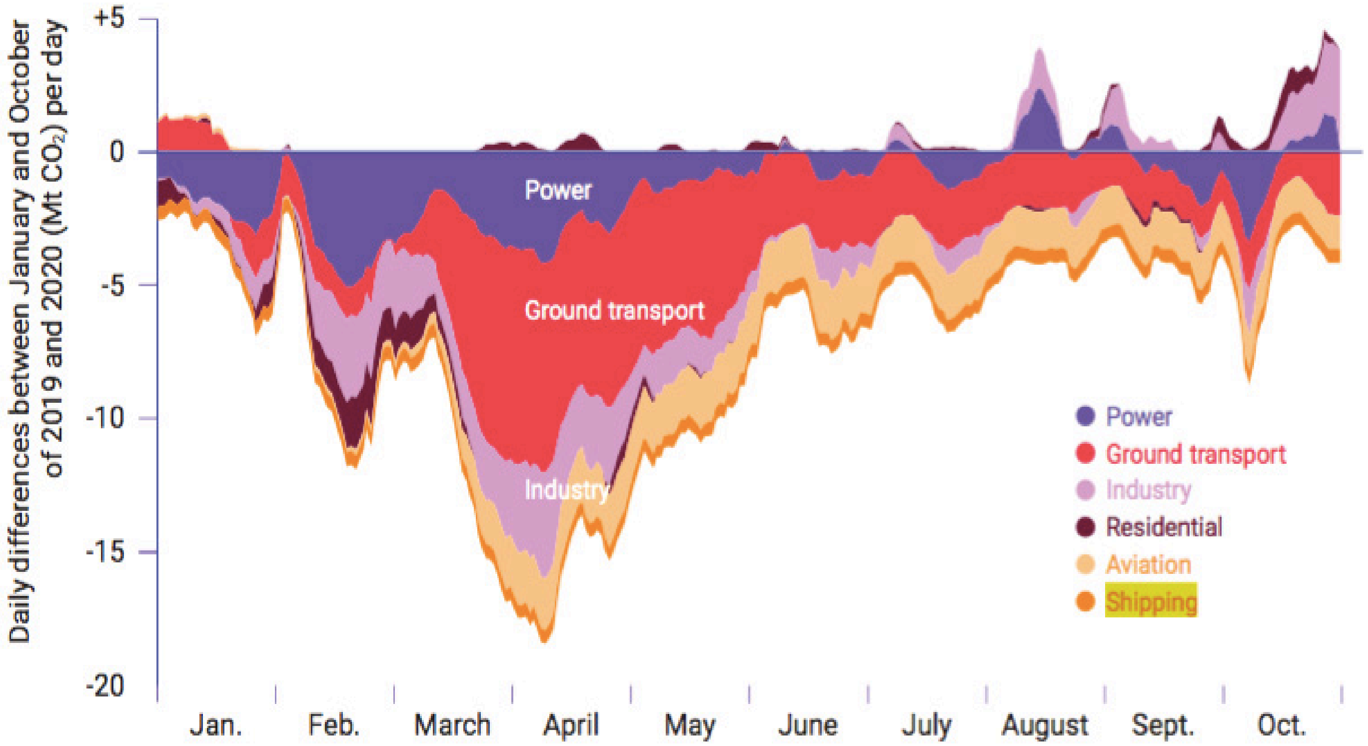
Source: Ship & Bunker

Shipping Beyond Covid-19

Surviving, thriving and sustainability, some of the many emerging key words this year as the maritime sector copes with the aftermath of the Covid-19 pandemic. While no one saw Covid-19 coming, preparing for a successful future means looking beyond the impacts of the pandemic and safeguarding operations from global disruptions that can paralyze operations.

The importance of collaboration between all maritime sectors has been thrown into the spotlight and will be needed more than ever as the world recovers. It is crucial to work together and build back better, stronger, and greener. Shipping, as the primary driver of world trade, has an important task in hand. In the year when the industry was faced with a crisis and had to prioritize survival, dedicating capital expenditure to clean technology may seem unnecessary to some. However, it is one the industry can't afford to miss. The business case for adopting cleaner technology is now more evident than ever. Today's greener vessels are increasingly in demand. By circumnavigating the hurdles proposed by bunker oil replacement, they're not only reducing operating costs but becoming attractive investments. Improvements in technology and operations can increase fuel efficiency. However, projected increases in demand means this will not result in decarbonization and absolute reductions of CO_2. The sector needs to combine energy efficiency with a rapid transition into alternative fuels. How can the shipping industry align its strategy with that of the global climate efforts?

Reduction in emissions in 2020 relative to 2019 levels due to COVID-19 lockdowns



2 $GtCO_2$/Year
Combined emissions from the shipping and aviation sectors (distributed evenly across the two sectors)
Source: Emissions Gap Report 2020

71%
of the CO_2 emissions from shipping are international and are not included in national totals reported to the UNFCCC.
Source: Emissions Gap Report 2020

From 35% to 55% Compared with 2018
The total potential of improving the energy efficiency of shipping up to 2050
Source: DNV GL 2019; Balcombe et al. 2020; IMO 2020

Energy News Highlights

Top 10 Headlines in Q4, 2020

October 2020

October 8
OPEC Forecasts Peak Oil Demand for First Time
OPEC estimates that global demand would hit 109.3 million b/d in 2040 before declining to 109.1 million b/d in 2045 and plateauing "over a relatively long period", in their annual World Oil Outlook.
Source: Reuters

October 13
IMF Sees Less Severe Global Contraction
Forecasts for the global economy are less dire, as more developed nations and China have rebounded quicker than expected from Covid-19 lockdowns. However, things look worse for emerging markets.
Source: BBC

October 14
Fujairah Oil Product Stocks Drop to Nine-Month Low
Oil product stockpiles at Fujairah tumbled to nine-month lows, wiping out gains for most of the year as stocks for marine fuels and power fell to the lowest in more than a year.
Source: S&P Global Platts

November 2020

November 2
Joe Biden Wins The US Presidential Election
Democrat Joe Biden is elected to be America's 46th President.
Source: CNN

November 12
IEA: Global Oil Demand Unlikely to Get Vaccine Boost Until Later in 2021
The IEA announced that global oil demand is unlikely to recover significantly, until well into 2021.
Source: Reuters

November 18
Covid-19 Vaccine: Pfizer Says '94% Effective'
A vaccine against Covid-19 developed by Pfizer and BioNTech appears to protect 94% of adults over 65 years old.
Source: BBC

Oil Gains 1% on Potential OPEC+ Rethink and Vaccine Hopes
Oil prices have increased by 1% on hopes OPEC will delay an increase in oil output after a vaccine discovered by Pfizer was 95% effective.
Source: Reuters

December 2020

December 3
OPEC+ Agrees to Gradually Increase Production with Not More Than 500,000b/d Starting Next Year
OPEC+ agree to increase oil production of 500,000 bpd starting in January 2021.
Source: Reuters

December 11
Oil Emerges from Covid-19 Abyss with Startling Year-End Turnaround
Brent crude climbs to $50 a barrel for the first time since the pandemic started, as the roll out of vaccines and OPEC starts to turn the market around.
Source: Bloomberg

December 15
IEA Sees Crude Glut Enduring to End-2021 Amid Demand Strains
The crude-oil glut left behind by the pandemic will clear by the end of next year, as markets face a gradual recovery marked by renewed strains on demand, the International Energy Agency said.
Source: Bloomberg

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